

REMARKS

In the Office Action mailed on July 25, 2002, the Examiner noted that claims 12 – 18 are generic to a plurality of disclosed patentably distinct species comprising the various materials defining the filament polymer. The election of specific R, R and R (*sic.*) moieties is requested. Applicants believe that the Examiner is requesting the election of specific R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> moieties. Claim 12 recites for R<sub>1</sub> polyamide repeating units, functional diamine unites or triamine units. Applicants elect polyamide repeating units. Nylon 6,6 is an example of a polyamide suitable for use with the present invention. Claim 12 also recites for R<sub>2</sub> optionally functionalized bis-N—acyl bislactam moieties. Preferred chain extender compounds are bis-N-acyl bis-caprolactam compounds and mixtures thereof. Isophthaloyl bis-caprolactam (IBC) is a most preferred chain extender compound.

Claim 12 also recites for R<sub>3</sub> a terminal group consisting of either a hydrogen atom or a hydroxyl group. Applicants choose both for the following reasons in the case where nylon 66 is chosen for R1. Nylon 66 is made from an equal number of (moles) of "hexamethylene diamine" and "adipic acid". A Nylon 66 chain consists of alternating monomer units of "hexamethylene diamine" and "adipic acid".

Applicants use **H** to represent a "hexamethylene diamine" monomer repeat unit and **A** to represent "adipic acid" monomer repeat unit. A nylon 66 chain would be one of these. A bulk piece of nylon 66 would have all of these chains in it.

hydrogen - H - A - H - A - H - A - H ..... A - H - A - H - A - H - A - hydroxyl  
hydrogen - H - A - H - A - H - A - H ..... H - A - H - A - H - A - H - hydrogen  
hydroxyl - A - H - A - H - A - H - A ..... H - A - H - A - H - A - H - hydrogen  
hydroxyl - A - H - A - H - A - H - A ..... A - H - A - H - A - H - A - hydroxyl

Actually, the first and the third are similar (reverse order).

As one can see a typical chain would have two ends and the end could be either "hexamethylene diamine" or "adipic acid". Consequently, the terminal groups could be either hydrogen or hydroxyl depending on the end monomer unit in the chain. If the monomer unit at the end of the polymer chain is a "hexamethylene diamine", then the terminal group is hydrogen. If the monomer unit at the end of the polymer chain is an "adipic acid", then the terminal group is a hydroxyl.

Since a bulk Nylon 66 contain all of these chain possibilities we need both hydrogen and hydroxyl as possible terminal groups. Therefore, if Applicants choose nylon 66, they cannot choose the terminal group. Both are always present.

Applicants propose to amend claim 12 to recite that the terminal groups R3 comprise at least one of hydrogen atom and a hydroxyl group in order to account for the presence of both of these terminal groups with nylon 66. This should obviate the

need for an election between a hydrogen atom and a hydroxyl group. However, in the Office Action the Examiner states that Applicant is required under 35 U.S.C. §121 to elect a single disclosed species, even though this requirement is traversed. Therefore, should the Examiner persist in the restriction requirement, Applicants choose a hydrogen atom.

The period for response to the Office Action of July 25, 2002 has been extended by one month with a Petition for Extension of Time, filed concurrently herewith. Should the fee designated with the Petition for Extension of Time be incorrect, please debit or credit Deposit Account No. 04-1928 (E.I. du Pont de Nemours and Company). Should an additional extension of time be required, the Examiner is authorized to take such additional extension of time and charge Deposit Account NO. 04-1928 for it.

In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,

JANE OBEE HAMBY  
ATTORNEY FOR APPLICANT  
REGISTRATION NO. 32,872  
TELEPHONE: (302) 892-7907  
FACSIMILE: (302) 892-7925

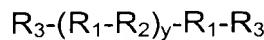
Dated: September 25, 2002

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

In showing the changes, deleted material is shown by strike-through, and inserted material is shown by underlining.

**IN THE CLAIMS:**

12. (Amended) A filament, comprising:  
a synthetic melt spun polymer including:  
polyamide repeating units or functional diamine or triamine units ( $R_1$ );  
polyamide chain extender moieties ( $R_2$ ), each independently, selected from  
the group consisting of optionally functionalized bis-N-acyl bislactam moieties;  
wherein at least one of the functional diamine, functional triamine or functional  
bis-N-acyl bislactam moieties are present; and  
terminal groups ( $R_3$ ) comprising at least one ~~each independently, selected~~  
~~from the group consisting of~~ of a hydrogen atom and a hydroxyl group;  
the polymer including chains, each independently having a chemical structure:



(2)

wherein  $y$  is an integer of 1 – 14; and  
the filament has a formic acid relative viscosity of at least about 30.